

REMARKS

Claims 3-11, 19-27, and 43-45 remain in the application. By the foregoing amendment, claims 1-2 and 17-18 are cancelled and new claims 43-45 are added. Claims 3-6, 8-9, and 19-24 are amended to depend from new claims 43 and 44. Support for the new claims can be found in the specification on page 13, lines 4-15 and page 24, lines 6-10. No new matter is entered into the case by the amendment. The foregoing amendment is believed to put the case in condition for immediate allowance.

In the Office Action, claims 1-11 and 17-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,811,040 to Mallonee and under 35 U.S.C. §103(a) as being unpatentable over the '040 patent in view of U.S. Patent No. 5,082,899 to Sawyer et al. The rejections under 35 U.S.C. §103(a) are respectfully traversed.

The Claims Are Patentably Distinguished Over The Cited References.

As provided in new claims 43-45, there is claimed a process for modifying the amount of discontinuous fibrils on the surface of filaments containing a polyolefin matrix and a fibril forming polymer to change the surface properties of the filaments. According to the claimed method, a spinneret depth to hydraulic diameter ratio of less than 3 is selected to provide an increased amount of fibrils on the surface of the polyolefin filaments and a spinneret having a depth to hydraulic diameter ratio of greater than 3 is selected to provide filaments that are substantially devoid of fibrils on the surface of the polyolefin filaments.

The depth to hydraulic diameter ratio is a physical characteristic of the spinneret used to draw the fibers as set forth in the specification on page 13, lines 4-6. The depth to hydraulic diameter ratio limitation in the claims is not a characteristic of the filaments or fibrils drawn through the spinneret.

In the §103(a) rejections of claims 1-11 and 17-27, the examiner cited the '040 patent alone or in combination with the '899 patent. The examples in the '040 patent give the leg lengths and the leg widths of "each trilobal capillary" (See for example col. 8, lines 31-32 and FIG. 1 of the '040 patent). It is without question that such dimensions are

only useful for determining the hydraulic diameter of a trilobal capillary. The '040 patent is absolutely silent as to the depth dimension of the capillary, whether trilobal or not and thus fails to suggest or disclose a depth to hydraulic diameter ratio that may be selected to change the surface properties of the filaments. There is absolutely no teaching or suggestion in the '040 patent to the use of a ratio of the depth to hydraulic diameter for any purpose much less for changing the amount of fibrils on the surface of the filaments. Hence, the examiner has failed to show where the '040 patent suggests or discloses this element of the claimed invention either explicitly or implicitly.

The only length and diameter ratios mentioned in the '040 patent are with respect to fibrils that may be embedded in the filaments produced by drawing the polymers through the capillaries. (See tables 5 and 6 of the '040 patent). A disclosure of the fibril dimensions is not a teaching, suggestion, or disclosure with respect to the capillary depth dimension, hydraulic diameter dimension, and ratio between the depth and hydraulic diameter.

In the rejection of claims 1-11 and 17-27 over the '040 patent, the examiner makes the unsupported assertion that it would have been obvious "one skilled in the art" at the time of the invention to "optimize this ratio" in order to make the desired final product. However, the motivation to change the depth to hydraulic diameter ratio of the spinneret in order to change the surface properties of the polyolefin filaments comes only from applicants' disclosure. The examiner has failed to cite any reference that teaches or suggests selecting ratios in the ranges claimed in order to change the amount of fibrils on the surface of the filaments. Accordingly, the examiner has failed to make out a prima facie case of obviousness with respect to the '040 patent alone.

Claims 1-11 and 17-27 were also rejected over the '040 patent in view of the '899 patent. The comments of the deficiencies of the '040 patent with respect to this rejection are set forth above and incorporated herein by reference. In an attempt to cure the deficiencies of the '040 patent to provide the claimed invention, the '899 patent was cited. The '899 patent is directed to the formation of biconstituent fibers of low and high density polyethylene. There is nothing in the '899 patent with regard to use of a

particular fibril forming polymer with the polyolefin polymers to provide filaments containing the fibril forming polymer in the polyolefin matrix and/or on the surface of the filaments.

Like the '040 patent, there is absolutely no teaching, suggestion or disclosure relating to selecting certain depth to hydraulic diameter ratios to change the amount of fibril forming polymer on the surface of the polyolefin filaments. Furthermore, one skilled in the art would know that the relatively low viscosity polyolefin mixture of the '899 patent has significantly different flow characteristics than the flow characteristics of the relatively higher viscosity mixture of the claimed invention. Hence, spinneret parameters that are suitable for the low viscosity materials are not particularly suitable for higher viscosity materials.

Furthermore, the examiner has failed to find the motivation in the '040 patent or the '899 patent to combine the references. It is well settled law that such motivation must be specifically pointed articulated in order to provide a prima facie case of obviousness. The '899 patent is directed to forcing high and low density polyethylene through a spinneret, whereas the '040 patent is directed to use of a polyolefin polymer and a polyamide or polyester fibril forming polymer. As set forth above, one skilled in the art would know there are different spinneret design selection criteria based on viscosity for the mixture of polymers of the '899 patent and for the mixture of polymers of the '040 patent. Thus, there is no motivation to select the L/D ratio of the '899 patent for use in the '040 patent.

The examiner is reminded that The “. . . mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole.” *In re Rouffet*, 149 F.3d 1350, 1355, 1357. In order to establish a prima facie case of obviousness based on a combination of elements disclosed in the prior art, the basis for the combination must be specifically articulated. In practice, this requires that the examiner to “. . . explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.” *Id.* at 1357-59.

Since the examiner has failed to articulate why one skilled in the art would be motivated to use the L/D ratio of the '899 patent in the '040 patent, and has failed to find in either reference suggestion or disclosure that would direct one skilled in the art to select the claimed depth to hydraulic diameter ratios to change the amount of fibrils on the surface of the filaments, the examiner has failed to make out a prima facie case of obviousness. Hence, the §103(a) rejections are wholly untenable. Reconsideration and withdrawal of the rejections are respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully requested that the amendment be entered and that rejections of claims 3-11 and 19-27 be withdrawn, and that claims 3-11, 19-27, and 43-44 be allowed.

In the event this response is not timely filed, Applicants hereby petition for the appropriate extension of time and request that the fee for the extension, along with any other fees which may be due with respect to this paper, be charged to our Deposit Account No. 12 2355.

Respectfully submitted.

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